

### **REMARKS**

In the October 25, 2010 Office Action, all of the claims stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

#### ***Status of Claims and Amendments***

In response to the October 25, 2010 Office Action, claim 3 is being amended to correct dependency and new claims 11-17 are being introduced. Otherwise, none of the claims are being amended by the current Amendment. Thus, claims 1, 3, 5-9 and 11-17 are pending, with claim 1 being the only independent claim. Reexamination and reconsideration of the pending claims are respectfully requested in view of the following comments.

#### ***Rejections - 35 U.S.C. § 103***

In paragraph 5 of the Office Action, claims 1, 3 and 5-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,245,182 (hereinafter the "Nakamura patent") in view of U.S. Patent No. 5,705,451 (hereinafter the "Takao patent").

Applicant respectfully asserts that the rejection of claims 1, 3 and 5-9, and in particular, independent claim 1 is improper because the Office Action fails to establish a *prima facie* case of obviousness. More specifically, the teachings of the cited prior art *fail* to render independent claim 1 unpatentable. Further the teachings of the Takao patent teach away from the invention recited in claim 1.

Beginning at the bottom of page 3 of the Office Action, the Office Action alleges that the Takao patent teaches that isocyanate compounds and chelate compound are equivalent and interchangeable. Further, the Office Action alleges that:

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use chelate compounds in place of isocyanate in the process of Nakamura as taught by Takao as the equivalence of the compounds present a reasonable expectation of success . . .

Applicants respectfully assert that the allegations set forth in the Office Action are contradicted by the experimental evidence presented in the application as originally filed, and further contradicted by the experimental evidence presented in the accompanying

**Declaration of Hiroyuki Hosoi.**

As discussed in the accompanying **Declaration**, Example 8 and Comparative Example 5 of the present specification (as originally filed) show that the improved work life of Example 8 (having a chelate compound free of isocyanate groups) is *three times greater* than that of the work life of Comparative Example 5 (which includes an isocyanate group). The comparison of the results of Example 8 and Comparative Example 5 show that these two groups are not equivalent, that they do not have the same properties and they do not react in the same way when used as a heat-curing agent. Thus, a chelate compound (free of isocyanate groups) and isocyanate compounds *are not interchangeable and are not equivalent*. This finding clearly contradicts the Office Action's allegation that it would be obvious to replace the isocyanate taught in the Nakamura patent with a chelate as allegedly taught in the Takao patent. Consequently, it would *not* have been obvious to one of ordinary skill in the art at the time of the invention was made to use chelate compounds in place of isocyanate in the process of Nakamura as taught by Takao. For this reason alone, the rejection is improper and must be withdrawn.

In the accompanying **Declaration**, further experiments are provided to show that a person of ordinary skill in the art would not look to the teachings of the Takao patent to

achieve the invention recited in independent claim 1 because the disclosure of the Takao patent in its entirety, teaches away from the combination of features recited in claim 1.

As discussed in the **Declaration**, at Column 11, lines 40-42 of the Takao patent, the Takao patent specifically teaches that catalysts preferably control reactivity. Applicant has conducted experiments showing that using a catalyst as taught by the Takao patent with the polymer recited in claim 1 yields undesirable results. Specifically, the use of a catalyst as taught by the Takao patent reduces the usefulness of the resin composition recited in claim 1. Thus, the Takao patent teaches away from the invention recited in claim 1. This finding again demonstrates that the rejection is improper and must be withdrawn.

Under U.S. patent law, the mere fact that the prior art can be modified does *not* make the modification obvious, unless an *apparent reason* exists based on evidence in the record or scientific reasoning for one of ordinary skill in the art to make the modification. See, KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1741 (2007). The KSR Court noted that obviousness cannot be proven merely by showing that the elements of a claimed device were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed." Id. at 1741. The current record lacks any apparent reason, suggestion or expectation of success for combining the patents to create Applicants' unique arrangement of a thermosetting and active energy ray curable resin composition.

More specifically, if the polymer of the Nakamura patent were some how modified to include the teachings of the Takao patent, such a combination would fail to yield the thermosetting and active energy ray curable resin composition recited in independent claim 1. Further, a person of ordinary skill in the art would have to ignore those disclosures of the

Takao patent that teach away from the invention, which is improper. MPEP 2141.02 clearly requires a prior art reference to be considered in its entirety.

Moreover, Applicant believes that dependent claims 3 and 5-9 are also allowable over the prior art of record in that they depend from independent claim 1, and therefore are allowable for the reasons stated above. Also, dependent claims 3 and 5-9 are further allowable because they include additional limitations. Thus, Applicant believes that since the prior art of record does not disclose or suggest the invention as set forth in independent claim 1, the prior art of record also fails to disclose or suggest the inventions as set forth in the dependent claims.

Therefore, Applicant respectfully requests that this rejection be withdrawn in view of the above comments and amendments.

#### *New Claims 11-17*

Applicant has added new claims 11-17 by the current Amendment. New independent claim 11 recites that the resin composition further includes a photopolymerization initiator, such that the thermosetting and active energy ray curable resin composition has two-step curable property provided by the heat-curing agent with exposure to an active energy ray.

With respect to new claim 11, Applicant notes that the Nakamura patent teaches preventing “remaining fluidity and stickiness on a protected printed layer” (see column 3, lines 23-25 of the Nakamura patent). The Nakamura patent further only teaches fully cross-linking the resin composition in a single step and does not disclose a two-step curable property. Applicant therefore asserts that new independent claim 11 is allowable. New dependent claims 12-17 depend from allowable claim 11 and are likewise allowable in that they depend from an allowable independent claim.

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In view of the foregoing amendment and comments, Applicant respectfully asserts that claims 1, 3, 5-9 and 11-17 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

Respectfully submitted,

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